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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/346,283	07/01/1999	MICHAEL R. FLANNERY	450.202US1	2222
24333	7590	09/07/2005	EXAMINER	
GATEWAY, INC. ATTN: SCOTT CHARLES RICHARDSON 610 GATEWAY DRIVE MAIL DROP Y-04 N. SIOUX CITY, SD 57049			DIAZ, JOSE R	
			ART UNIT	PAPER NUMBER
			2815	

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

09/346,283

Applicant(s)

FLANNERY, MICHAEL R.

Examiner

José R. Díaz

Art Unit

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 June 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 12-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 7, 12-18, 21-22 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergstrom et al. (US Pat. No. 6,087,701) in view of Floyd et al. (US Pat. No. 6,014,240).

Regarding claims 1-2, 12-15, 21-22 and 25-26, Bergstrom et al. teaches an integrated circuit with a micromechanical element comprising:

a semiconductor substrate (10) [see fig. 4];

a micromechanical sensor element (30) formed on the semiconductor substrate and comprising a microengineered movable element [see fig. 4 and col. 3, lines 19-22];

a logic circuit (40) formed on the semiconductor substrate [see fig. 4]; and

wherein the sensor element is electrically connected to the logic circuit [see col. 5, lines 3-7].

However, Bergstrom et al. fails to teach the limitation of a semiconductor visual display element formed on the semiconductor substrate, wherein the logic circuit is electrically connected to the semiconductor visual display element.

Floyd et al. teaches that it is well known in the art to integrate MEMS substrate (130) to a LED Display substrate (105) by bonding the substrates to a carrier substrate (101) [see fig. 1].

Bergstrom et al. and Floyd et al. are analogous art because they are from the same field of endeavor as applicant's invention. At the time of the invention it would have been obvious to a person of ordinary skill in the art to integrate the substrate of Bergstrom et al. to a LED Display substrate by bonding the substrate to a carrier substrate, wherein the logic circuit and the MEMS are electrically connected to the semiconductor visual display element through the carrier substrate. The motivation for doing so, as is taught by Floyd et al., is to gain the desired optical system simplification (col. 1, lines 32-34). Therefore, it would have been obvious to combine Floyd et al. with Bergstrom et al. to obtain the invention of claims 1-2, 7, 12-18, 21-22 and 25-26.

Regarding claims 7 and 16-18, Bergstrom et al. teaches said sensor element is selected from the group consisting of strain gauges, thermal gauges, radiation gauges, and chemically responsive gauges [see col. 3, lines 18-22].

3. Claims 3-6, 19-20, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergstrom et al. (US Pat. No. 6,087,701) in view of Floyd et al. (US Pat. No. 6,014,240), and further in view of Holm et al. (US Pat. No. 5,501,990).

Regarding claims 3-6 and 19, a further difference between the prior art and the claimed invention is that said visual display comprises an of GaAs light-emitting pn junctions and/or an array of semiconductor pixels having a pitch of about 20  $\mu\text{m}$ . Holm

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et al. teaches that it is well known in the art to use GaAs LEDs having a pixel pitch dimension of less than 20  $\mu\text{m}$  as display devices (see col. 1, lines 15-17 and 20-22, col. 3, lines 25-60, and col. 6, lines 1-2).

Bergstrom et al., Floyd et al. and Holm et al. are analogous art because they are from the same field of endeavor as applicant's invention. At the time of the invention it would have been obvious to a person of ordinary skill in the art to further include a visual display element comprising GaAs LEDs having a pixel pitch of less than 20  $\mu\text{m}$ . The motivation for doing so, as is taught by Holm et al., is to provide a high quality image (col. 5, lines 39-42). Therefore, it would have been obvious to further combine Holm et al. with Bergstrom et al. and Floyd et al. to obtain the invention of claims 3-6, 19-20, 23 and 24.

Regarding claims 20, 23 and 24, Holm et al. further teaches that it is well known in the art that an array of LEDs is used to form complete images containing pictorial (e.g. colors) and/or alphanumeric characters (see col. 1, lines 20-22).

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-7 and 12-26 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Polosky et al. (US Pat. No. 6,307,815 B1) discloses a MEMS

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device over a semiconductor substrate (12) (see fig. 1); Dickey et al. (US Pat. No. 5,990,473) discloses MEMS device in figure 4.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


### ***Correspondence***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R. Díaz whose telephone number is (571) 272-1727. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
José R. Díaz  
Examiner  
Art Unit 2815

  
TOM THOMAS  
SUPERVISORY PATENT EXAMINER